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Torres Lacomba, Anna; Atribo, Jo; Bijmolt, Tammo H.A.

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Generating Global Brand Equity through Corporate Social Responsibility to Key Stakeholders

by

Anna Torres¹

Economics and Business Department

Universitat Pompeu Fabra

Tammo H. A. Bijmolt²

Faculty of Economics and Business

University of Groningen

Josep A. Tribó³

Business Department

Carlos III University

and

Peter C. Verhoef⁴

Faculty of Economics and Business

University of Groningen

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¹ C/ Ramon Trias Fargas, 25-27, 08005 Barcelona, Spain. E-mail: anna.torres@upf.edu

² PO Box 800, 9700 AV Groningen, The Netherlands. E-mail: t.h.a.bijmolt@rug.nl

³ C/ Madrid, 126, 28903 Getafe, Madrid, Spain. E-mail: joatribo@emp.uc3m.es

⁴ PO Box 800, 9700 AV Groningen, The Netherlands. E-mail: p.c.verhoef@rug.nl

Abstract

In this paper we argue that corporate social responsibility (CSR) to various stakeholders (customers, shareholders, employees, suppliers, and community) has a positive effect on global brand equity (BE). In addition, policies aimed at satisfying community interests help reinforce credibility to social responsible policies with other stakeholders. We test these theoretical contentions using panel data comprised of 57 global brands originating from 10 countries (USA, Japan, South Korea, France, UK, Italy, Germany, Finland, Switzerland and the Netherlands) for the period 2002 to 2008. Our findings show that CSR to each of the stakeholder groups has a positive impact on global BE. In addition, global brands that follow local social responsibility policies over communities obtain strong positive benefits in terms of the generation of BE, as it enhances the positive effects of CSR to other stakeholders, particularly to customers. Therefore, for managers of global brands it is particularly productive for generating brand value to combine global strategies with the satisfaction of the interests of local communities.

Keywords: Global Brands, Brand Equity, Corporate Social Responsibility, Stakeholders.

I. Introduction

Global brands are widespread in multiple markets, such as financial services, telecom, and fast-moving consumer goods. Multiple firms, such as Unilever, have clearly started to focus more on building strong global brands instead of building multiple (strong) local brands (Kumar, 2005). A strong corporate social responsibility (CSR) record is considered to be a key expectation from these global brands (Holt, Quelch & Taylor, 2004). Implementation of a CSR policy may generate a trusting relationship that leads stakeholders to become committed to the organization through actions such as customer loyalty, stockholder capital investments, and supplier investments (Garbarino & Johnson, 1999; Maignan & Ferrell, 2004; Sen, Bhattacharya & Korschun, 2006). In the global marketplace, a firm's social and environmental track record and its treatment of employees are considered as very important trust issues (Edelman, 2008).

Yet, it is frequently stated that global brands do not have strong CSR records, and they are accused of predatory behavior (Connor, 2001). Besides, building up CSR reputations is difficult for global brands, as global brands have to build local CSR reputations through local relationships while they also have to display global social responsibility (Polonsky & Jevons, 2009). Moreover, CSR practices of global brands are typically perceived as being self-interested, which may reduce their effects on brand equity (BE) (e.g. Prout, 2006; Yoon, Gürhan-Canli & Schwarz, 2006). Specific examples have shown the relevance of CSR for global brands. The large problems of BP with their local oil operations in the Gulf of Mexico near Louisiana had strong global repercussions for the global BP brand (Ritson, 2010). Coca Cola was confronted with protests by customers in the UK and the USA because of what was considered their poor environmental record in India and allegations of human rights violations in Columbia (Hills & Welford, 2005). Moreover, the global presence of brands and their operations may even cause the CSR policies of strong highly visible global brands to backfire. For example, Nike has sought to associate itself with the rights, needs, and aspirations of the socially disadvantaged, such as

African Americans, women and the disabled -i.e. through using brand endorsements such as Michael Jordan- (Knight & Greenberg, 2002, p. 547). However, the so-called anti-sweatshop movement believed that Nike is hypocritical, as Nike was blamed for exploiting young, migrant, female workers in the developing world to produce its products and only uses its promotional CSR to boost sales (Knight & Greenberg, 2002). Similar arguments appear in Wagner, Lutz and Weitz (2009) who point out the negative reaction of consumers towards reactive CSR strategies which try to mitigate harm after some irresponsible action has been reported. The Nike case also points to a complicating issue, namely that CSR involves activities focused on multiple stakeholders, including customers, employees, shareholders, and the community in which the credibility of CSR policies will play a pivotal role in the efficient implementation of CSR initiatives. Firms, therefore, need to understand whether and how their multi-faceted CSR efforts have an impact on their global BE.

Within the academic literature there is a vast amount of research on the effects of CSR on brand performance metrics, such as brand evaluations and brand loyalty, and firm performance (e.g. Luo & Bhattacharya, 2006; Du, Bhattacharya & Sen, 2007a; Klein & Dawar, 2004; Orlitzky, Schmidt & Rynes, 2003). However, studies on CSR and global brands are scarce. Holt et al. (2004) emphasize the importance of CSR as a way to differentiate for global brands, while Polonsky and Jevons (2009) discuss global branding and CSR in a qualitative manner. Specific in-depth case studies have described CSR issues for global brands, such as Nike and Coca Cola (e.g. Hills & Wellford, 2005; Knight & Greenberg, 2002). Research within business ethics has also discussed the relevance of CSR for global firms and research on CSR from a global perspective (e.g. Arthaud-Day, 2005; Manakkalathil & Rudolf, 1995; Prout, 2006). However, we could not identify any studies that explicitly studied the relationship between a global brand's CSR efforts and global BE in an international setting.

The key research question in this study is to investigate the effects of CSR practices to different stakeholders on global BE, emphasizing the role played by credible CSR initiatives. We

first investigate whether CSR efforts impact global BE. Second, we aim to assess which CSR efforts have the strongest effects on global BE. We hypothesize that the direct effects of CSR to the community and customers on global BE will be stronger, particularly when complemented between them, than the effects of CSR directed at other stakeholders. Thirdly, we investigate the potential moderating role of CSR to the community, which confers credibility to CSR initiatives, on the impact of CSR to different stakeholders on BE.

We address these issues using panel data of 57 global brands originating from 10 countries (the US, Japan, South Korea, France, the UK, Italy, Germany, Finland, Switzerland, and the Netherlands), as included in the 2002–2008 Sustainalytics Global Profile (SGP) database. Each firm's CSR profile contains items that cover major stakeholder issues. We complement the database with global BE information obtained from Interbrand. Our econometric approach allows us to assess potential long-term effects through the inclusion of a lagged BE term in our model. Hence, we also discuss potential long-term effects of CSR on global BE.

The contributions of this study are threefold. First, although prior theoretical arguments justify the connection between CSR and BE, we provide the first empirical study addressing this issue at an international level. Second, this study explicitly examines the differential effects of CSR efforts to different stakeholders on global BE, where we specifically focus on the important role of CSR efforts to the community and customers. Last, we contemplate interaction effects between community satisfaction and different CSR dimensions in the generation of brand value.

The remainder of this paper is organized as follows. We will first discuss our theoretical underpinnings and the derived hypotheses. Then, we will describe our data and econometric model used. The modeling results are discussed subsequently and we end with a conclusion, managerial implications, a discussion of our research limitations and resulting future research directions.

2. Theoretical Underpinnings and Hypotheses

2.1 CSR and Brand Equity

CSR has gained attention in multiple disciplines including marketing, management, strategy, and business ethics. A relatively broad definition of corporate social responsibility is: “the company’s status and activities with respect to its perceived societal obligations” (Brown & Dacin, 1997, p. 68). Its broad nature also implies that CSR involves multiple initiatives relevant for multiple stakeholders, such as community support, employee support and diversity (Sen et al., 2006).

For the management of brands, firms need a strong understanding of what is driving BE. Keller and Lehmann (2006) consider three distinct perspectives for studying BE: (1) customer-based, (2) company-based and (3) financially-based. In this study we use the Interbrand measure for our measure of global BE. This measure, which is discussed in greater detail in our methodology section, is frequently used within marketing (e.g. Madden, Fehle & Fournier, 2006). It has a rather broad perspective as it involves both a financial and a customer perspective, although it is not free from criticism (Madden et al., 2006).

2.2 Effect of CSR on Brand Equity

Although there are multiple studies that look at outcomes of CSR, no study has yet investigated the effect of CSR on global BE. We expect CSR to positively affect global BE. Given that our BE measure involves both a customer dimension and a financial dimension, we use two lines of reasoning as to why this effect may occur. First, CSR may affect customer brand preferences and customer loyalty (e.g. Bhattacharya & Sen, 2004; Du et al., 2007a; Orlitzky et al., 2003). Second, CSR may affect the financial performance of a brand (Luo & Bhattacharya, 2006).

Within the popular marketing literature it is generally acknowledged that CSR should positively affect customers’ brand perceptions (e.g. Rust, Zeithaml & Lemon, 2000). Importantly, Holt et al. (2004) argue that social responsibility is an important driver of global brand evaluations.

However, the driving role of CSR to customers on BE depends on the credibility of such policies. Multinational companies that market global brands are often accused of seeking to maximize

their corporate profits without much regard for the needs of the poorer and weaker societies in which they operate, e.g. Nike's sweat-shop labor, Coca-Cola's alleged water exploitation, etc. (Knight & Greenberg, 2002; Hills & Welford, 2005). Such problems may appear in visible CSR initiatives that are connected to benefit salience (Yoon et al., 2006), where firms are believed to use CSR for their own self-interest only (Prout, 2006). Hence, in this situation it is important to achieve credibility in CSR initiatives in order to ensure effectiveness in the implementation of CSR policies that are connected to firms' core business (Yoon et al., 2006).

Within the marketing literature there is ample evidence that customer beliefs concerning CSR affect individual customer outcomes, such as brand preference, brand loyalty, positive word-of-mouth etc. Evidence is also provided by Hoeffler and Keller (2002) and Keller (2003), who both report that corporate social marketing can enhance customer brand metrics, such as brand awareness, brand image, brand credibility and brand engagement. Lichtenstein, Drumwright and Braig (2004) showed that customers of a grocery chain that has stronger CSR beliefs tend to be more loyal to that chain. In the same vein Du et al. (2007a) report that visible CSR leads to stronger brand identification, brand loyalty and brand advocacy. Recently, Vlachos, Tsamakos, Vrechopoulos and Avramidis (2009) showed associations between CSR and repeat patronage intentions and recommendation intentions. This kind of customer loyalty connected to CSR acts as an implicit brand insurance, which is particularly valuable for global brands that are subject to changing social expectations, affluence, and globalization (Werther & Chandler, 2005). As these authors quote "*CSR is about incorporating common sense policies into corporate strategy, culture, and day-to-day decision making to meet stakeholders' needs, broadly defined. It is about creating strategies that will make firms and their brands more successful in their turbulent environments. Stripped of the emotionalism and name calling, we see strategic CSR as global brand insurance*". Remarkably, given the risks that controversies in one subsidiary of global brands may affect the full organization, it is particularly relevant for such global brands to be perceived as credible organizations in terms of CSR policies. Being labeled as socially responsible

organizations, will prevent the spread of a bad image when a local problem occurs, which may seriously damage a global brand image. Hence, all these studies support the positive main effects of CSR on multiple customer brand metrics, particularly for global brands.

Our second line of reasoning concerns the link between CSR and a brand's financial performance. Orlitzky et al. (2003) theorize on two potential routes through which CSR may affect financial performance. The first path is through the improvement of capabilities and competencies within the firm. Building on the resource-based view of the firm (Barney, 1991), they argue that CSR requires and thus improves managerial competencies, such as improved scanning skills, processes and information systems, which increase the organization's preparedness for external changes, turbulence and crisis. Such competencies are particularly relevant for managing global brands, as these operate in different environments. The other route concerns the improvement of reputation among its stakeholders. Specifically, CSR, when credible, may build a positive image among customers (as discussed above), investors, bankers and suppliers (Fombrun & Shanley, 1990; Sen et al., 2006). In such a setting, customer loyalty increases, thus enhancing firm value. Also, CSR initiatives, when credible, reduce information asymmetries and monitoring needs, which are particularly acute in large and complex organizations -those that typically support global brands- (Zajac & Westphal, 1994). The reduction in such information asymmetries will favor non-customer stakeholders to make costly firm-specific investment for providing valuable resources which will in turn generate BE. In their meta-analysis Orlitzky et al. (2003) indeed show a positive correlation between CSR and financial performance.

In short, the above discussion shows that there is ample evidence that CSR, particularly when visible and credible, can affect customer brand metrics and financial brand performance metrics. Hence, we formally hypothesize:

H1: CSR positively affects global brand equity.

2.3 Differential effects of CSR initiatives to different stakeholders

In our discussion of the main effect of CSR on BE, we consider CSR as one broad, overarching construct. However, as already noted, CSR involves multiple initiatives to different stakeholders (Sen et al., 2006). In this research, we specifically distinguish CSR initiatives to: the community, customers, shareholders (labeled as corporate governance), employees and suppliers. These five stakeholders are frequently mentioned in different studies on CSR as important stakeholders (e.g. Orlitzky et al., 2003; Bhattacharya & Sen, 2004; Sen et al., 2006). So far no studies have explicitly studied the differential effects of CSR initiatives to these different stakeholders. However, the meta-analytic results of Orlitzky et al. (2003) suggest differential effects between CSR initiatives. They specifically report that philanthropic donations aimed at the community were more strongly related to financial performance than all other CSR initiatives studied.

Wood and Jones (1995) argue that differential effects of CSR initiatives on performance may occur, because expectations and evaluations of CSR may differ from one stakeholder group to another. They further argue that there should be no mismatch between the CSR stakeholder measures used and the studied outcome measure. Hence, they suggest the existence of a positive relationship between CSR initiatives to market-oriented stakeholders (i.e. customers) and market measures. Applying this reasoning to our study one could argue that CSR initiatives relevant for customers should have a stronger effect than other CSR initiatives on our global BE measure, which is partially based on customer metrics. In line with this, Bhattacharya and Sen (2004, p. 14) argue that companies need to identify what customers consider to be CSR-related activities and ascertain the resources devoted to such activities.

An additional explanation for differential effects builds on the visibility reasoning. CSR initiatives may differ in their *visibility* (Burke & Logsdon, 1996). While initiatives to customers may be rather visible in the market place, initiatives to internal stakeholders (i.e. employees) and external stakeholders higher up in the supply chain (i.e. suppliers, investors) will be less visible to consumers. Moreover, such differentials in visibility are amplified in global brands given that they are closely monitored by mass-media (Clinard & Yeager, 2006). Prior research has acknowledged

the importance of CSR awareness. Du et al. (2007a, p. 238) explicitly state: “*CSR awareness, or the lack thereof, is a key stumbling deficiency in most CSR strategies*” (see also Bhattacharya & Sen, 2004; Du, Bhattacharya & Sen, 2010; Maignan & Ralston, 2002; Maignan & Ferrel, 2004). However, visibility of CSR initiatives may be less beneficial for the brand when CSR initiatives are related with the company’s business (e.g. a cigarette producer sponsoring a cancer fund) increasing the salience of firm-serving benefits (Yoon et al., 2006). In order to eliminate these backfire effects, the combination of visible CSR initiatives directed at customers to credible CSR less related to a firm’s core business is of particular value. One example of the latter CSR initiatives is CSR to community. In this line, studying the results of a CSR initiative focusing on the community of Crest toothpaste, Du, Bhattacharya & Sen (2007b) show that this initiative builds credibility and customer loyalty which, in turn, enhance brand value.

A last line of reasoning is based on Granovetter’s (1983) analysis, which suggests that distant connections among units in a large organization (those of global brands) are more informative than strong connections in explaining firm behavior. A firm’s real ethical commitment can be inferred from the behavior of a firm with regard to its loosely connected stakeholders in terms of direct interests such as local communities. Such (secondary) stakeholders are particularly distant from the interest of global brands’ headquarters, which may function as a more credible signal of lack of self-interest.⁵ The consequence is that CSR to communities should have a significant effect on the generation of BE through customers’ decisions, particularly when combined with visible CSR to customers, given that the latter are increasingly more aware of buying products from firms that follow a credible CSR policy (Christmann, 2004).

Based on the above *visibility* and *credibility* rationales, we expect that CSR initiatives to customers and the community should have a stronger effect on BE than initiatives to suppliers,

⁵ Godfrey, Merrill, and Hansen (2009) differentiate between two types of stakeholder: primary, who are essential to the operation of the business, and secondary, who can influence the firm’s primary stakeholders. In particular, customers, employees, suppliers, and shareholders constitute primary stakeholders, and broader groups, such as the community, constitute secondary stakeholders (Clarkson, 1995; Greenley, Hooley & Rudd, 2005; Mitchell, Agle & Wood, 1997).

investors and employees. However, we emphasize that we do not expect null effects of these latter initiatives. As discussed in our previous section, CSR initiatives to any stakeholder group create a firm's competitive advantage through stakeholder provision of valuable intangible resources that, in turn, create firm value (Orlitzky et al., 2003; Sharma & Vredenburg, 1998). Beyond that, also, improved reputations among employees, investors and suppliers may benefit the firm (e.g. Orlitzky et al., 2003; Langerak, 2001; Kaufman, Jayachandran & Rose, 2006; Srivastava, Shervani & Fahey, 1998). We thus hypothesize as follows:

H2: CSR initiatives to community, customers, investors, employees, and suppliers each have a positive effect on global brand equity.

H3: CSR initiatives to the community and customers have a stronger effect on global brand equity than CSR initiatives to investors, employees, and suppliers.

2.4 Moderating role of CSR to the community

Previous research has emphasized the importance of implementing a credible CSR to ensure that CSR attracts the attention of different stakeholders (Lewellyn, 2002; Logsdon & Wood, 2002; Mahon, 2002). CSR practices geared to the community undoubtedly satisfy the firm's credibility (Du et al., 2007b; Vlachos et al., 2009), as these initiatives clearly go beyond the direct interest of the firm. Also, as mentioned, a firm's real commitment in maintaining a CSR policy to different stakeholders can be most clearly inferred from the relationship of a firm to distant units (Granovetter, 1983), over which the direct interest of a firm is less clear, particularly in the case of global brands. We can identify secondary stakeholders such as local community as "distant" stakeholders with regard to the interests of headquarters in global brands multinationals, whereas CSR policies to customers could be considered as having a direct relevance for the firm through creating more satisfied customers, for example. Remarkably the credibility of CSR to community is not only important for visible CSR initiatives such as those directed at customers but also for "internal" stakeholders such as employees and suppliers. These stakeholders will be more willing

to make specific investments in order to provide valuable intangible assets when a firm has built a reputation of credibility in social issues. In these firms the hold up problem related to firm-specific investments is less acute. The above reasoning applies particularly to global brands, where organizations that support them are large and they are more likely to suffer information asymmetries that require intensive monitoring (Zajac & Westphal, 1994), which are at the basis of agency problems preventing the aforementioned firm-specific investments. Thus, the effectiveness of CSR initiatives to other stakeholders will increase when firms, particularly global brands, have implemented CSR practices to the community. Other stakeholders will then develop a sentiment of fairness, which generates the credibility of CSR initiatives (Geyskens, Steenkamp & Kumar, 1998; Vlachos et al., 2009; Sen et al., 2006) improving their effectiveness. CSR on the community to generate trust to other stakeholders fits global brands particularly well. For these firms, a strategy of integrating perceived brand globalness with the development of local symbols through relationships to local communities leads to a more profitable strategy than a pure global standardization strategy (Alden, Steenkamp & Batra, 2006).

Based on the above reasoning, we propose that CSR initiatives to the community will reinforce the positive effects (positive moderation) of CSR to others stakeholders on global BE. Note that such credibility argument related to communities is particularly important for global brands given the risks they bear from controversies in some subsidiaries of their network affecting the overall organization. As extensively discussed by Knight and Greenberg (2002) for Nike, the negative social performance towards employees in developing countries might damage the overall reputation of Nike, hence, it is particularly important for such global brands devoting credible community-oriented CSR. We thus hypothesize:

H4: Firms' CSR to the community positively moderates the effects of CSR to other stakeholders (customers, shareholders, suppliers, and employees) on global BE.

3. Data set

Our sample combines panel data from two databases. First, the SGP database (formerly SiRi Pro) is the largest publicly available international database specializing in the analysis of socially responsible investments in Europe and North America. The SGP database provides information on 199 items that cover major stakeholder issues, such as community involvement, customer policies, employment relations, corporate governance, supplier relations, ethical issues, and controversial activities. The data come from interviews by Sustainalytics specialists.⁶ The second database is Interbrand, which provides information on the global BE of the most valuable companies (see <http://www.interbrand.com>). Combining both databases leaves us with an unbalanced panel data of 57 global brands from 10 different countries for the period 2002–2008. The initial unbalanced panel of 357 observations⁷ is reduced to 243 because we lose 2 years (114 observations) as we lag the dependent variable by one period in order to study long-term effects. The second year is lost in the instrumentation of the endogenous variables given that we take instrumental variables that are constructed using specifications that include up to 2 lagged variables (see the Methodology section). In the final sample there is an average of 4 observations per firm. Such figure ensures that the panel is relatively balanced.

The distribution of the 57 firms and 243 observations among countries is as follows: the United States (35 firms and 145 -59.67%- of observations); Germany (6 firms and 26 -10.70%- of observations); Japan (6 firms and 26 -10.70%- of observations); France (3 firms and 13 -5.35%- of observations); the United Kingdom (2 firms and 8 -3.29%- of observations); Switzerland (1 firm and 5 -2.06%- of observations); Finland (1 firm and 5 -2.06%- observations), Korea (1 firm and 5 -2.06%- observations); Italy (1 firm and 5 -2.06%- observations) and the Netherlands (1 firm and 5 -2.06%- observations). In terms of distribution among sectors (one-digit Standard Industrial Classification [SIC]), the frequencies are as follow: mining and construction (SIC = 1): (1 firm and 4-1.65%- observations); manufacturing:

⁶ For further information on the SGP database see <http://www.sustainalytics.com/>.

⁷ The complete panel would have been 399 observations. The reduction to 357 observations is because for 14 firms, values are missing in different years in some of the variables that we need to estimate our specifications, mainly the variable on R&D.

tobacco, beverage, printing, chemicals (SIC = 2): (16 firms and 68 -27.98%- observations); manufacturing: metal, machinery, electronics and optics (SIC = 3): (26 firms and 111 -45.68%- observations); public services: transportation, radio, television, electric, gas sanitary (SIC = 4): (4 firms and 17 -7.00%- observations); wholesale and retail trade (SIC = 5): (4 firms and 17 -7.00%- observations); services (SIC = 7): (5 firms and 22 -9.05%- observations); and public administration (SIC = 8): (1 firm and 4 -1.65%- observations).

3.1 Variables

We measure the dependent variable, *Brand Equity* (BE), with the Interbrand score. Interbrand's method for valuing global brands consists of three analyses: financial, role of brand, and brand strength. The financial analysis forecasts current and future revenues attributed to the branded products, less the costs of doing business (e.g. operating costs, taxes) and intangibles (e.g. patents, management strength), to assess the portion of earnings due to the brand. The role of the brand constitutes a measure of how the brand influences customer demand at the point of purchase. Finally, brand strength provides a benchmark of the brand's ability to secure ongoing customer demand (loyalty, repurchase, and retention) and sustain future earnings, which translates branded earnings into net present value. This assessment provides a structured way to determine specific risks to the strength of the global brands.⁸

Keller and Lehmann (2003; 2006) divide existing measures of BE into three categories: customer mind-set, product market, and financial market outcomes. The measure for this study integrates product market and financial market outcomes, which makes the measure more "complete" than a single-category measure (see Ailawadi, Lehmann & Neslin, 2003). In addition, the Interbrand measure addresses criticisms concerning the lack of objectivity in BE measures

⁸ From 2007 on, rebalancing occurs in the weights of the seven components on which the BE measure relies: leadership, stability, support, protection, market, trend, and internationality. To account for this discontinuity in the methodology, in the estimations we include a dummy variable that equals 1 for the years beyond or equal to 2007 and 0 for the years before 2007. In addition, we estimate specification (1) separating the sample into two subperiods (2002–2006 and 2007–2008). The results remain consistent. Further details on the methodology to compute the BE are available at <http://www.interbrand.com>.

based exclusively on customer mind-set (Ailawadi et al., 2003). Besides, Madden et al. (2006) defend the use of Interbrand data. Moreover, the Interbrand measure is widely used and influential (Farris, Bendle, Pfeifer & Reibstein, 2006; Haigh & Perrier, 1997). However, this measure is not free from criticism. First, it only considers a small selection of strong (global) brands, and does not include weak brands (Chu & Keh, 2006; Madden et al., 2006). Second, the Interbrand measure is proprietary (Farris et al., 2006), unlike the other frequently used Y&R Brand Asset Value measure, which is based on surveys of consumers regarding their attitudes concerning brands (e.g. Mizik & Jacobson, 2008).

The independent variables include CSR practices geared to a range of stakeholders: community, customers, employees, suppliers, and shareholders. As proxies for community, customer, corporate governance, employees, and suppliers, we compute the weighted average of those items shown in Table I.⁹ The weights are sector-specific and are determined by SGP analysts. They take into consideration the potential negative effect of a firm's operations in the different items of each stakeholder. The weight is assigned in proportion to this potential. Once normalized, the result is a continuous-type variable between 0 and 100%.¹⁰ The SGP database also provides an overall rating on CSR by weighting the score of the different stakeholders (see the Appendix for an example of how these scores are computed). The resulting score is a proxy for the overall intensity in the implementation of social responsible policies.

⁹ We conducted internal consistency and dimensionality tests to assess the reliability of these proxies. On internal consistency, the reliability coefficients (Cronbach's alphas) for the five measures of stakeholders are greater than 0.90, indicating that the proxies are internally consistent with the underlying factor of the different stakeholders' satisfaction. In particular, reliability coefficients are 0.947 for the community, 0.942 for customers, 0.975 for corporate governance, 0.973 for employees and 0.918 for suppliers. For dimensionality, we also included the set of indicators of one factor as indicators in another factor; their individual correlations in almost all cases are below 0.5, indicating the unidimensionality in the loadings.

¹⁰ For example, the items that are more related to practical issues involving the community are weighted more heavily for public services: transportation, radio, television, electric, gas, sanitary (SIC = 4) rather than for manufacturing: tobacco, beverage (SIC=2).

We include ROA and R&D as controls (McWilliams & Siegel, 2000; Chu & Keh, 2006)¹¹; risk as it relates to a firm's leverage (Rego, Billett & Morgan, 2009); and size, which is a proxy for a firm's visibility -BE value is connected to a firm's visibility- (Godfrey et al., 2009). See Table I for definitions.

[Insert Table I about here]

3.2 Methodology

We test our hypotheses by relying on a specification that explains global BE value in terms of the different dimensions of a firm's CSR and a set of control variables. In particular, we consider the following specification, which also includes interactive terms, to test Hypothesis 4:

$$\begin{aligned} \text{Brand Equity}_{it} = & \beta + \alpha_0 \text{Brand Equity}_{it-1} + \alpha_1 \text{Community}_{it} + \alpha_2 \text{Customer}_{it} + \alpha_3 \text{Corporate governance}_{it} + \\ & \alpha_4 \text{Employees}_{it} + \alpha_5 \text{Suppliers}_{it} + \alpha_6 \text{Community} \times \text{Customer}_{it} + \\ & \alpha_7 \text{Community} \times \text{Corporate governance}_{it} + \alpha_8 \text{Community} \times \text{Employees}_{it} + \\ & \alpha_9 \text{Community} \times \text{Suppliers}_{it} + \alpha_{10} \text{Size}_{it} + \alpha_{11} \text{ROA}_{it} + \alpha_{12} \text{Leverage}_{it} + \\ & \alpha_{13} \text{R\&D}_{it} + \text{Controls}(\text{sector}, \text{year}, \text{country}) + \eta_i + \varepsilon_{it} \end{aligned} \quad (I)$$

where i and t index firm and year, respectively; controls (sector, year, country) are a set of dummy variables that capture temporal, sector and country effects; η_i is the possible firm-specific component of the error term; and ε_{it} is the error term.¹²

This specification has three caveats. First, a correlation might exist between unobservable firm-specific error term η_i and some of the explanatory variables (fixed-effect problem). For example, the characteristics of the manager (which are time invariant) may influence the CSR policy as well as the global brand value. In this case, the relationship between CSR policies and global BE would be spurious and based on their mutual connection with managerial characteristics (η_i). We examine the relevance of this

¹¹ Investment in R&D improves a firm's technology capability which, on the one hand, can accommodate better products to consumer preferences and, on the other, improves productivity which, in turn, increases financial performance. Both features lead to an increase in a firm's BE.

¹² We assume the same carryover effects for all stakeholders. Our assumption of no differential lags on the impact of the different stakeholders' satisfaction on BE relies on our theoretical framework, in which we posit that all stakeholders have an impact on BE without differentiating temporal lags among them. This assumption is widely used in the literature connecting social performance with financial performance (see the meta-analyses of Margolis & Walsh, 2003; Orlitzky et al., 2003).

fixed effect in our specification using the Hausman test. The result of this test is that we can estimate specification (1) using random-effect estimations, which are more efficient than fixed-effect ones.¹³

Second, the previous estimation may have reverse causality problems: BE value may help firms obtain resources from financial markets to be devoted to social issues (i.e. slack theory; see McGuire, Sundgren & Schneeweis, 1988; Waddock & Graves, 1997). We address this endogeneity concern related to reverse causality by using instruments of the potential endogenous variables (the overall CSR score, Community, Customer, Corporate governance, Employees, and Suppliers). To construct such instruments, we run an estimation of each potential endogenous variable in terms of the following explanatory variables: the corresponding dependent variable lagged by one and two periods respectively,¹⁴ Size, ROA, Leverage and R&D intensity as defined in Table I. Once we run such estimations, we compute the predicted value of each estimation.¹⁵ Such predicted variables are taken as instruments of the endogenous variables. Note that there are two conditions that a good instrument has to satisfy. First, an instrument should show a high correlation with the instrumented variable and, second, an instrument should show null correlation with the error term in the specification explaining BE. The predicted values computed using the lagged values of the endogenous variables (CSR and different stakeholders' satisfaction variables) as well as control variables are, by construction, highly correlated with the instrumented variables given the inertia of a firm's CSR policy.¹⁶ Besides, we do not expect such instruments to be correlated with the error term in the specification of BE. Note that once we compute the predicted value of each endogenous variable, we are imposing that the error term of the corresponding specification is equal to 0. Thus, we are

¹³ We also rely on random-effect estimations because of the persistence in the variables related to CSR policies (low intertemporal variability). This persistence makes fixed-effect estimations, which are based on differences along time, particularly inefficient. Additionally, there is high inertia in the dependent variable –BE–, which is captured by the high value of the α_0 parameter that measures adjustment costs.

¹⁴ We have included up to 2 lagged-period variables in the estimations used for constructing the instruments because of the presence of the dependent variable (BE) lagged by one period as explanatory in specification (1).

¹⁵ These predicted values are the result of multiplying the different estimated coefficients times the explanatory variables taken in their mean value of the distribution.

¹⁶ The coefficients of the lagged dependent variables in all specifications are larger than 0.6 with $p < .01$. The variable that shows the greatest persistence is the community, with a coefficient of 0.647. These figures are indicative of the significant correlation between the instruments and the instrumented (CSR) variables.

eliminating the part of the endogenous (CSR and different stakeholders' satisfaction) variables that is not explained by the lagged dependent variables up to 2 periods as well as the control ones. This unexplained part is, by construction, very likely to be connected to the error term in specification (I) of BE. The elimination of this error component allows also eliminating the correlation between the error term in specification (I) of BE variable and the instruments (predicted variables). Then, both conditions of an instrument are satisfied.¹⁷

Third, we estimate a partial adjustment model (Hanssens, Parsons & Schultz, 2001) in which we include the dependent variable lagged by one period. The inclusion of this variable enables us to tackle adjustment costs associated with changes in a firm's brand value. The implicit assumption is that firms approach an optimal level of BE with some adjustment costs. In addition, with this approach we can compute both long-term and short-term effects.¹⁸ One criticism of this model is that the error terms may be correlated along time. We test for this possibility and we do find that a first-order correlation exists in the error term. Thus, we conduct a general least squares (GLS) random-effect estimation, specifying both AR(I) autocorrelation and heteroskedasticity in the error term. In the estimations we cluster the error term at firm level.

Hypothesis 1 is confirmed when the coefficient of CSR in explaining BE is significantly positive. We test Hypothesis 2 if $\alpha_1 > 0, \alpha_2 > 0, \alpha_3 > 0, \alpha_4 > 0, \text{ and } \alpha_5 > 0$ according to specification (I).¹⁹ Hypothesis 3 is tested if $\alpha_1, \alpha_2 > \text{Max}(\alpha_3, \alpha_4, \alpha_5)$. Finally, we test Hypothesis 4 with the coefficients $\alpha_6, \alpha_7, \alpha_8, \alpha_9$ of the terms that result when we cross the variable Community times the variables that capture CSR policy with respect to the remaining stakeholders (Customer, Corporate governance,

¹⁷ Additionally, and in accordance with the previous two conditions, we have also conducted two tests, which are reported in Table 3, to measure the relevance of the instruments as well as their exogeneity. First, we show an F-test developed by Stock and Yogo (2005) that measures the explanatory power of the instruments of the endogenous variable. The second is the Hansen test to contrast the overidentification restriction, that is, whether instruments are orthogonal to the error term (Bascle, 2008). All instruments pass the previous tests as shown in Table 3.

¹⁸ The partial adjustment model proposed assumes that all dimensions of CSR are short-term as well as long-term determinants of BE. This conforms to our theoretical framework where our theoretical contentions apply to short-term as well as long-term scenarios.

¹⁹ The coefficients that capture the long-term effects are: $\frac{\alpha_1}{1-\alpha_0}, \frac{\alpha_2}{1-\alpha_0}, \frac{\alpha_3}{1-\alpha_0}, \frac{\alpha_4}{1-\alpha_0}, \frac{\alpha_5}{1-\alpha_0}$

Employees, and Suppliers). Hypothesis 4 is confirmed when $\alpha_6, \alpha_7, \alpha_8, \alpha_9$ are significantly positive and there is a significant improvement in the R^2 from the model without interactions.

3.3 Results

Descriptive statistics

Table 2 shows the means, standard deviations, minimum and maximum values, and the correlations of the variables used in specification (I). The correlation matrix shows that BE is positively correlated with all stakeholders and mainly with Community (25%) and Customers (20%). This evidence is in line with Hypotheses 1, 2 and 3. However, we cannot extract definitive conclusions from this preliminary analysis given that such correlation analysis does not control for the possibility of spurious connections related to variables like Size. In addition, among the control variables, large firms, more profitable firms, firms that invest in R&D are all positively correlated with BE. Almost all correlations between the explanatory variables are below 0.70²⁰, and the variance inflation factors are below 10 except for the term *Community x Customer* (10.27) indicating that multicollinearity is not a critical problem.²¹

[Insert Table 2 about here]

Main Effects of CSR

Table 3 shows the results of model specification (I). Column 1 includes the aggregate score of CSR as an explanatory variable; in column 2, we disaggregate this variable in its different dimensions (Community, Customer, Corporate governance, Employees and Suppliers). In both cases, we use the instrumental variables, as we explained in the Methodology section (3.2).

²⁰Four correlations involving interaction terms are slightly above the threshold of 0.70. In order to test whether this feature generates serious multicollinearity problems, we have re-estimated the complete specification using a dummy *D_Community* instead of the continuous variable *Community*. The previous dummy is equal to 1 (0) when community is above (below) the mean value for the corresponding sector and year. The interaction terms with such dummy show correlations below 0.70, hence, multicollinearity is less problematic. Remarkably, the results using such alternative interaction terms are similar to those shown in Table 3.

²¹Consistently with the lack of multicollinearity problems, we have conducted the Belsley (1991) test, which establishes that a condition number above 30 is a signal of multicollinearity problems. In our case, the condition number for the full specification –model of column 3 in Table 3 (instruction *condnmb3* in STATA) is 23.7. Additionally, we conducted different estimations that include single interaction terms that cross *Community* times the different stakeholders, and we compared the results with those of the complete specification of column 3 in Table 3 which includes all of the interaction terms (available upon request). The coefficients found in the different specifications are quite stable, which is indicative of the lack of serious multicollinearity problems.

We find that a firm's CSR has a positive impact on BE ($\alpha_0 = 0.657, p < 0.01$). For the different dimensions of a firm's CSR (see column 2), we find that Community ($\alpha_1 = 0.725, p < 0.01$), Customer ($\alpha_2 = 0.544, p < 0.01$), Corporate governance ($\alpha_3 = 0.510, p < 0.01$), Employees ($\alpha_4 = 0.491, p < 0.01$), and Suppliers ($\alpha_5 = 0.511, p < 0.01$) have a positive effect on a firm's BE value. The above results support Hypotheses 1 and 2.

Community and customer CSR have indeed the largest effects on BE (column 2 of Table 3). However, the t-tests show no significant differences between any of the coefficients compared (all p-values $> .10$).²² Hence, we find no significant empirical support for hypothesis 3.

Among the control variables, large firms that are more visible ($\alpha_{10} = 0.060$ with $p < 0.01$), more profitable ($\alpha_{11} = 0.032$ with $p < 0.10$) and firms that invest in R&D ($\alpha_{13} = 0.095$ with $p < 0.05$), which creates intangible assets, have higher BE values.

Finally, the inclusion of the lagged term of BE in our model, allows assessing the long-term effects of CSR activities. The significant coefficient of $\text{Brand Equity}_{it-1}$ in column 2 of Table 3 ($\alpha_0 = 0.910, p < 0.01$) indicates that all stakeholders are significant determinants of long-term BE value. In particular ($\frac{\alpha_1}{1 - \alpha_0} = 8.055$ with $p < 0.01$) for Community; ($\frac{\alpha_2}{1 - \alpha_0} = 6.044$ with $p < 0.01$) for Customer; ($\frac{\alpha_3}{1 - \alpha_0} = 5.667$ with $p < 0.01$) for Corporate governance; ($\frac{\alpha_4}{1 - \alpha_0} = 5.455$ with $p < 0.01$) for Employees; and ($\frac{\alpha_5}{1 - \alpha_0} = 5.678$ with $p < 0.01$) for Suppliers.

Interaction Effects with CSR community

Column 3 of Table 4 shows the tests of Hypothesis 4 and includes four alternative interaction terms (Community \times Customers, Community \times Corporate governance, Community

²² We are using $\frac{\alpha_{\{1,2\}} - \alpha_{\{3,4,5\}}}{\sqrt{\sigma_{\epsilon}^2(\alpha_{\{1,2\}}) + \sigma_{\epsilon}^2(\alpha_{\{3,4,5\}})}}$ statistic to test significant differences between the coefficients of Community and Customers (α_1 and α_2) and those of Corporate governance, Employees and Suppliers (α_3, α_4 and α_5).

× Employees, and Community × Suppliers). These variables test the possible moderating effect of Community on the different stakeholders to BE.

In accordance with column 2, all stakeholders have positive impacts on a firm's BE. Regarding the interactive terms, we have found that Community, interacted with the remaining stakeholders' variables, enhances the positive impact of these latter variables on BE. In particular, Community positively moderates the effect of Customer on BE ($\alpha_6 = 0.004$ with $p < 0.01$). Hence, although we do not find larger effects of CSR to community and CSR to customers with respect to other stakeholders, we do find that the combination of CSR to community and customers generate larger effects on BE than other stakeholders do individually.²³ By the same token, Community plays a positive moderating role in the connection from shareholder value (Corporate governance) to BE value ($\alpha_7 = 0.002$ with $p < 0.05$). These results also hold for employees ($\alpha_8 = 0.0015$ with $p < 0.05$) and suppliers ($\alpha_9 = 0.0019$ with $p < 0.10$). Remarkably, the moderating effect of community is larger when combined to CSR to customers than when combined to other stakeholders.²⁴ This result confirms our statement that the effects of credible CSR policies (*i.e.* CSR to community) will have particularly large effects when combined to visible CSR policies like those of CSR to customers.

Finally, the coefficient of the dependent variable lagged by one period is still significant with $p < 0.01$, and thus we can state that the previous moderating results also hold for long-term analysis. All these results confirm Hypothesis 4.

Concerning the model fit, R^2 is very high (98.97%) and this is an improvement on the model of column 2 ($\Delta R^2 = 3.04$, $p = 0.034$), which indicates that Community plays a

²³ In the specification of column 3, we will also see that Community x Customers generates larger effects not only to other individual stakeholders, but also to the combination of these latter stakeholders to Community.

²⁴ When we compare the coefficient of Community x Customer to Community x Corp. governance, the t-test of differences shows a p-value=0.025. Such p-value is 0.020 for the comparison between Community x Customer and Community x Employees. Finally, the comparison between Community x Customer and Community x Suppliers leads to a p-value =0.059.

significant moderating role in the model of column 3.²⁵ Remarkably, once we extract the lagged dependent variable from the specification, the R^2 decreases to 49.72% -approximately one half of the explanatory power is due to the lagged dependent variable. This is evidence that there is considerable inertia in BE, indicating that CSR investment has long-lasting effects on BE value.

[Insert Table 3 about here]

4. Discussion, Implications, Limitations and Future Research

4.1 Discussion of results

In this paper, we analyze the effect of different dimensions of a firm's corporate social responsible (CSR) policy on the creation of global brand equity (BE). Studying CSR for global brands is highly relevant, as global brands are frequently blamed for not having strong CSR records. Our study using a longitudinal database of 57 global brands in various industries and 10 different countries shows strong effects of CSR initiatives directed at different stakeholders on global BE. Below, we discuss our most important results and reflect on the implications for the management of global brands.

First, we find that CSR positively affects global BE. This is an important extension of the previous literature on CSR, as it is the first study to actually show this effect in an international setting. This result confirms prior studies showing that CSR affects firm performance (e.g. Luo & Bhattacharya, 2006; Margolis & Walsh, 2003; Orlitzky et al., 2003). Moreover, we also show that CSR directed at stakeholders, generates a positive effect on both short-term and long-term BE value.

Second, CSR to community and to customers do not have a significantly larger effect on a firm's global BE than the other CSR efforts. However, the combination of both CSR policies

²⁵ Such a high value in R^2 is similar to other studies that include the lagged dependent variable as explanatory. For example, Sriram, Balachander and Kalwani (2007) found an R^2 of 92% in an estimation of BE in terms of that variable lagged by one period as well as a variable of advertising innovations and sales promotion.

(to customers and to the community) do have a larger impact on BE than CSR to other stakeholders. These results do not confirm that CSR initiatives that are more visible or credible in the market place have a greater effect on BE. Nevertheless, they do confirm that joint CSR initiatives combining visibility (customers) and credibility (the community) have a stronger effect on such a marketing metric as global BE than other combinations. This result confirms claims made by Wood and Jones (1995) that there should be a match between the CSR initiative and the outcome measure. Besides, the insignificance in the differences of our findings on the direct effects for the different stakeholders can potentially be attributed to the relatively small number of firms in our sample. Beyond that, we may argue that “internal” stakeholders such as employees and suppliers are as important as community and customers given that the latter provide the type of valuable intangible resources which are the basis of a firm’s competitive advantage, which, in turn, enhance a firm’s BE. Another explanation might be that, as already noted, CSR visibility can also have some negative effects, as it may induce a stronger salience of self-benefit firm motives of CSR (Yoon et al., 2006). This is the reason why it is particularly important to combine visible CSR (directed at customers) with credible CSR (directed at the community).

Third, the importance of CSR to communities is, however, emphasized by the interaction effects that have been found of CSR to the community and CSR initiatives to other stakeholders and particularly to customers. These results point to the indirect beneficial effect of CSR to community. The satisfaction of community interests gives *credibility* to a firm as an entity with an ethical stance to all stakeholders (Godfrey et al., 2009). Such gained reputation has a direct value of its own, particularly to global brands, given that in the event of shocks generating controversies in parts of the organization, a gained reputation in social issues may prevent the spread of a bad image throughout the organization that may seriously damage a global brand image. The indirect effect of CSR to community is a reinforcing mechanism (positive moderator), in terms of the positive impact of satisfying all stakeholders’ interests on BE. Such a reinforcing mechanism reflects the trust that derives from firms applying credible

CSR practices to secondary stakeholders (Logsdon & Wood, 2002). Furthermore, connections to distant stakeholders are more informative than connections to closer ones in assessing a firm's credibility on its ethical stance (Granovetter, 1983). Therefore, a global brand that has gained trust through its relationship to community, will be capable of lending confidence to all of its stakeholders regarding its long-term commitment, which in turn will have a positive effect on its short-term and long-term BE value. Finally, we argue that for large and complex organizations that are behind global brands, information asymmetries and the need for monitoring are particularly important (Zajac & Westphal, 1994). In this framework, the implementation of credible CSR policies like those targeted to community will reduce opportunistic behaviors that emerge in information asymmetry contexts. The result is a creation of brand value.

4.2. Managerial implications

Our findings provide several implications for managers.

First, we demonstrate that global brand managers should indeed incorporate CSR as a main component into their brand equity-enhancing strategy, as Polonsky and Jevons (2009) suggest. Second, managers that wish to send visible and credible signals of commitment to enhance their firms' global BE value should pay particular attention to the less salient stakeholders. That is, global brand management should give substantial weight to satisfying local community interests. To illustrate the importance of focusing on CSR for global brands and specifically the strong effects of CSR to the community, we have executed an analysis on the economic consequences of improving different CSR components. In economic terms, when we do not consider interaction effects, the marginal impact of CSR to Customer on BE is given by the coefficient ($\alpha_2 = 0.518, p < 0.01$). However, when we consider interaction effects with Community, once we fix CSR to Community at its mean value of the distribution (58.16), the marginal effect of CSR to Customers on BE is given by the coefficient

($\alpha_2 + \alpha_6 \times \text{Mean}(\text{Community}) = 0.518 + 0.004 \times 58.16 = 0.751, p < 0.01$). These coefficients mean that an increase in one standard deviation in Customer satisfaction (0.227) leads to an increase in \$1752.24 million in BE²⁶ -or an 11.76% increase from the mean value of BE (\$14,900 million) without considering interaction effects. This figure increases to 17.04% (\$2538.96 million) when we include the moderation of Community, which means that the moderating effect of Community is translated to a relative increase of 44.90% (\$786.72 million) in BE value. When we apply the same type of analysis to Corporate governance, the numbers are a 9.57% increase when we do not consider interaction effects and a 12.20% increase (\$1817.8 million) when we consider interaction effects and we fix Community at its mean value. For Employees, the increase is 8.09% when we do not consider interaction effects and 9.78% (\$1457.22 million) when we consider interaction effects. Finally, for Suppliers the figures are 9.84% and 12.46% (\$1856.54 million) respectively. Thus, the variations in the different CSR dimensions lead to considerable economic variations in BE and particularly when Community moderates CSR to Customers.

So, global brands that aim to improve BE with CSR should really develop CSR initiatives to communities that reinforce CSR initiatives with other stakeholders. CSR initiatives to the local community can be especially valuable, as they may fit in with existing global brand strategies. Specifically, firms can pursue a double strategy of creating a global brand with the development of symbols at a local level (Alden et al., 2006) through the satisfaction of local community interests. This is the sort of strategy followed by firms such as Coca Cola and Heineken, that are perceived simultaneously as global brands and firms with strong roots in the different national communities (Alden et al., 2006).

Third, the relevance of CSR for global brands also has implications for their merger and acquisition strategies. Global brands that expand internationally and wish to create certain standards of CSR policies abroad should acquire firms with strong community roots. In short,

²⁶ This number is found by performing $0.223 \times 0.518 \times 14900 = \1721.16 million. Note that the dependent variable BE is defined on a log scale and that the mean value of BE is \$14900 million.

global brand managers need to be aware that local satisfaction is at the root of improving global BE value. Such a strategy would eliminate fears of corporate expropriation by entrant firms in less developed countries.

Lastly, one final implication is that managers should not focus on single-stakeholder CSR policies, particularly those managers of global brands. These multinational enterprises (MNE) should be particularly aware of maintaining a balance among different stakeholders in the generation of BE. Managers of global brands should not put excessive weight just on market-oriented stakeholder-like customers. Brands are complex social phenomena, and thus managers that wish to sustain CSR policies to create global BE value should maintain a balance among the different stakeholders, rather than focus on a single stakeholder (Maio, 2003). That is, all components of CSR have a positive impact on global brands.

4.3. Limitations and future research avenues

One of the limitations of our study is that the MNE analyzed are based in developed countries, which may question the generalizability of the results found. Moreover, the use of the Interbrand measure, which focuses on strong (global) brands strengthens this problem. However, the measurement approach of Interbrand, which is not based on customer surveys, but on proprietary information, may open the possibility of extracting information from subsidiaries of MNE operating in less developed countries. Nevertheless, we may speculate that the effect of conducting social responsible policies in developing countries is a more powerful signal to MNE commitment to stakeholders and we may expect that the effect on BE should even be clearer than that in developed countries. Further research should be extended to developing countries and emerging economies, such as Turkey, Brazil, and China (Burgess & Steenkamp, 2005). A second limitation is the dichotomous items used in the definition of the proxies on social responsibility to the different stakeholders. We have minimized such problem by averaging a broad set of items in order to obtain a continuous-type variable.

Our findings reveal that satisfying community interests is highly relevant to creating and maintaining global brand value. A natural extension of our model would be to incorporate virtual communities into the analysis to determine whether the reinforcing effects linked to real communities also hold for these types of communities. Another avenue would be to include other stakeholders in the analysis. For example, research could assess whether the crucial role of CSR to one secondary stakeholder (community) differs from other secondary stakeholders, such as the environment. The absence of environment-related CSR in our measurement of CSR is a limitation. Hills and Welford (2005) discuss the relevance of the environment issue for Coca Cola, suggesting the potential relevance of this CSR issue in a global branding context. This is confirmed indirectly in our analysis given that some items in the community score refer to environmental issues. Finally, a contingency analysis on the economic cycle would be of interest. Following existing research on the consequences of the economic cycle (e.g. Lamey, Deleersnyder, Dekimpe & Steenkamp, 2007), it is of crucial importance to understand whether and which CSR policies become more or less relevant during economic recessions. Moreover, it would also be relevant to investigate whether the global BE of brands that have invested in CSR is less affected or may even benefit from strong market crises, such as the recent financial crisis. Initial case-based evidence in the Dutch banking market suggests that the cooperative Rabobank with clear local community CSR initiatives has been less affected by the global crisis (Verhoef, Wesseliuss, Bügel & Wiesel, 2010). Future research could investigate this empirically.

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Table I. Definition of the variables

| Dependent Variables | |
|-----------------------------|---|
| Brand Equity | <p>The score that Interbrand provides for such issue is measured in million US \$. Interbrand's method of valuing brands consists of three analyses: financial, role of brand, and brand strength. Financial analysis forecasts current and future revenues attributed to the branded products, subtracting the costs of doing business (e.g. operating costs, taxes) and intangibles, such as patents and management strength, to assess the portion of earnings due to the brand. The role of the brand constitutes a measure of how the brand influences customer demand at the point of purchase. Finally, brand strength provides a benchmark of the brand's ability to secure ongoing customer demand (loyalty, repurchase, and retention) and sustain future earnings, which translates branded earnings into net present value. This assessment provides a structured means to determine specific risks to the strength of the brands. We take this variable in logs in order to reduce skewness.</p> |
| Main Explanatory Variables: | |
| Community | <p><i>Community satisfaction</i> is the weighted average of the following items where Yes (Y) is tabulated as 100% and No (N) is tabulated as 0: (1) Local community programs (Y/N); (2) Formal policy on local community involvement (Y/N); (3) Management responsibility for local community affairs (Y/N); (4) Formal volunteer programs (Y/N); (5) Programs for consultation with local communities (Y/N); (6) Percentage of donations directed at local communities. The weights are sector-specific and they are determined by SGP's analysts. They take into consideration the potential negative effect of a firm's operations in the different items of Community's interests. Once normalized, the result is a continuous-type variable between 0 and 100%. For those items that are not dichotomic variables, there are intermediate values: 20% means marginal (first quartile), 40% means below the mean; 50% in the mean; 60% above the mean; 80% clearly significant (last quartile).</p> |
| Customers | <p><i>Customers</i> is the weighted average of the following items where Yes (Y) is tabulated as 100% and No (N) is tabulated as 0: (1) a formal policy statement noting customer issues (Y/N); (2) the existence of a formal policy with regard to product quality (Y/N); (3) whether a formal policy pertains to marketing/advertising practices (Y/N); (4) the existence of a formal policy on product safety (Y/N); (5) there is board responsibility for customer satisfaction (Y/N); (6) facilities with quality certification (Y/N); and (7) marketing practices designed to satisfy customers (Y/N). The weights are sector-specific and they are determined by SGP's analysts. They take into consideration the potential negative effect of a firm's operations in the different items of Customers' interests. Once normalized, the result is a continuous-type variable between 0 and 100%.</p> |
| Corporate governance | <p><i>Corporate governance</i> is the weighted average of the following items, where Yes (Y) is tabulated as 100% and No (N) is tabulated as 0: (1) Number of board committees; (2) Managerial stock ownership;</p> |

| | |
|-----------|--|
| | <p>(3) The company has corporate governance principles (Y/N); (4) Directors' term of office; (5) Board performance evaluation (Y/N); (6) Number of NEDs in the Board; (7) Number of independent NEDs in the Board; (8) Separate position for chairman of board and CEO (Y/N); (9) "One share, one vote" principle (Y/N); (10) Absence of anti-takeover devices (Y/N). The weights are sector-specific and they are determined by SGP's analysts. They take into consideration the potential negative effect of a firm's operations in the different items of Corporate Governance's interests. Once normalized, the result is a continuous-type variable between 0 and 100%. For those items that are not dichotomic variables, there are intermediate values: 20% means marginal (first quartile), 40% means below the mean; 50% in the mean; 60% above the mean; 80% clearly significant (last quartile).</p> |
| Employees | <p><i>Employees satisfaction</i> is the weighted average of the following items, where Yes (Y) is tabulated as 100% and No (N) is tabulated as 0: (1) Policies/Principles regarding employees (Y/N); (2) Formal policy statement on health and safety (Y/N); (3) Formal policy on diversity/employment equity (Y/N); (4) Formal policy on freedom of association (Y/N); (5) Formal policy statement on child/forced labor (Y/N); (6) Formal policy statement on working hours (Y/N); (7) Formal policy statement on wages (Y/N); (8) Board responsibility for human resources issues (Y/N); (9) Specific health and safety targets (Y/N); (10) Diversity/Equal opportunity programs (Y/N); (11) Work/Life programs (Y/N); (12) Training programs (Y/N); (13) Participative management programs (Y/N); (14) Cash profit-sharing programs (Y/N); (15) Supervisory Board (NEDs) (Y/N). The weights are sector-specific and they are determined by SGP's analysts. They take into consideration the potential negative effect of a firm's operations in the different items of Employees' interests. Once normalized, the result is a continuous-type variable between 0 and 100%.</p> |
| Suppliers | <p><i>Suppliers satisfaction</i> is the weighted average of the following items, where Yes (Y) is tabulated as 100% and No (N) is tabulated as 0: (1) Code of conduct for contractors (Y/N); (2) Board responsibility for contractors' human rights (Y/N); (3) Contractors' awareness programs (Y/N); (4) Contractors with social certification (Y/N); (5) Health and safety programs among contractors (Y/N); (6) Freedom of association among contractors (Y/N); (7) Child/Forced labor among contractors (Y/N); (8) Discrimination among contractors (Y/N); (9) Employment conditions among contractors. The weights are sector-specific and they are determined by SGP's analysts. They take into consideration the potential negative effect of a firm's operations in the different items of Suppliers' interests. Once normalized, the result is a continuous-type variable between 0 and 100%. For those items that are not dichotomic variables, there are intermediate values: 20% means marginal (first quartile), 40% means below the mean; 50% in the mean; 60% above the mean; 80% clearly significant (last quartile).</p> |

| | |
|---------------------------|--|
| CSR | It is the weighted average of community, customer, corporate governance, employees, and suppliers scores. These weights are the result of adding the different weights that are included in the policy and managerial procedures section of each stakeholder. The result is a continuous-type variable between 0 and 100%. |
| Control variables: | |
| Size | Total sales on a log scale |
| ROA | Earnings before interest and taxes to total assets |
| Leverage | The debt-to-equity ratio |
| R&D | The ratio of R&D investments to total sales |

Table 2. Descriptive Statistics ^a

| | | Obs | Mean | SD | Min | Max | VIF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|----|------------------------------|-----|----------|----------|-------|---------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | Brand equity | 243 | 14900 | 14740 | 2490 | 65174 | 8.17 | 1.00 | | | | | | | | | | | | |
| 2 | Community (%) | 243 | 58.16 | 22.26 | 6.32 | 95.47 | 6.48 | 0.25 | 1.00 | | | | | | | | | | | |
| 3 | Customer (%) | 243 | 56.28 | 22.72 | 4.50 | 92.46 | 5.45 | 0.20 | 0.62 | 1.00 | | | | | | | | | | |
| 4 | Corporate Governance (%) | 243 | 50.39 | 22.58 | 4.67 | 90.48 | 2.48 | 0.09 | 0.67 | 0.70 | 1.00 | | | | | | | | | |
| 5 | Employees (%) | 243 | 37.28 | 19.35 | 0.00 | 84.25 | 5.26 | 0.11 | 0.43 | 0.40 | 0.57 | 1.00 | | | | | | | | |
| 6 | Suppliers (%) | 243 | 32.06 | 23.66 | 0.00 | 80.00 | 4.27 | 0.13 | 0.45 | 0.63 | 0.62 | 0.42 | 1.00 | | | | | | | |
| 7 | Community x Customer | 243 | 2671.88 | 2240.93 | 0.00 | 8784.33 | 10.27 | 0.22 | 0.60 | 0.65 | 0.52 | 0.44 | 0.46 | 1.00 | | | | | | |
| 8 | Community x Corp. governance | 243 | 2376.837 | 1689.684 | 0.00 | 8413.04 | 7.19 | 0.14 | 0.71 | 0.58 | 0.68 | 0.47 | 0.42 | 0.56 | 1.00 | | | | | |
| 9 | Community x Employees | 243 | 2179.53 | 1586.45 | 0.00 | 7449.20 | 8.40 | 0.09 | 0.79 | 0.52 | 0.48 | 0.79 | 0.44 | 0.56 | 0.67 | 1.00 | | | | |
| 10 | Community x Suppliers | 243 | 1879.65 | 1669.966 | 0.00 | 7125.00 | 6.59 | 0.10 | 0.70 | 0.52 | 0.48 | 0.79 | 0.45 | 0.57 | 0.67 | 0.65 | 1.00 | | | |
| 11 | Size | 243 | 16.51 | 4.43 | 10.33 | 26.35 | 2.56 | 0.08 | 0.33 | 0.28 | 0.28 | 0.04 | 0.02 | 0.17 | 0.24 | 0.07 | 0.07 | 1.00 | | |
| 12 | ROA (%) | 243 | 11.32 | 9.10 | -9.95 | 31.56 | 1.32 | 0.10 | 0.18 | 0.10 | 0.04 | 0.07 | 0.09 | 0.09 | 0.13 | 0.03 | 0.02 | -0.12 | 1.00 | |
| 13 | Leverage | 243 | 2.27 | 3.91 | 0.13 | 4.336 | 1.13 | 0.02 | -0.18 | -0.15 | -0.02 | -0.10 | -0.12 | -0.14 | -0.18 | -0.14 | -0.14 | 0.13 | -0.39 | 1.00 |
| 14 | R&D | 243 | 0.33 | 2.76 | 0.00 | 4.22 | 2.44 | 0.05 | 0.28 | 0.09 | 0.37 | 0.13 | 0.13 | 0.08 | 0.32 | 0.15 | 0.04 | 0.65 | 0.03 | -0.16 |

^a We have shown the figures for Brand equity (BE) in normal scale (million US \$) in order to provide a clear picture of the real order of magnitude of brand value of the firms in our sample. However, to be consistent with the specifications estimated, we provide VIF as well as correlations using BE on a log scale.

Table 3: Determinants of brand equity^a

| VARIABLES | (1) Brand Equity (t) Random effects | (2) Brand Equity (t) Random effects | (3) Brand Equity (t) Random effects |
|----------------------------------|---|---|---|
| Brand Equity (t-1) | 0.975*** (0.037) | 0.910*** (0.020) | 0.822*** (0.034) |
| CSR | 0.657*** (0.201) | | |
| Community | | 0.725*** (0.213) | 0.633*** (0.260) |
| Customer | | 0.544*** (0.194) | 0.518*** (0.135) |
| Corporate governance | | 0.510*** (0.141) | 0.424*** (0.177) |
| Employees | | 0.491*** (0.162) | 0.418*** (0.185) |
| Suppliers | | 0.511*** (0.201) | 0.416*** (0.181) |
| Community x Customer | | | 0.004*** (0.001) |
| Community x Corp. governance | | | 0.002** (0.0008) |
| Community x Employees | | | 0.0015** (0.0007) |
| Community x Suppliers | | | 0.0019** (0.001) |
| Size | 0.061*** (0.021) | 0.060*** (0.021) | 0.058*** (0.024) |
| ROA | 0.037* (0.027) | 0.032* (0.021) | 0.038 (0.028) |
| Leverage | 0.089* (0.051) | 0.076* (0.050) | 0.065 (0.083) |
| R&D | 0.140** (0.056) | 0.095** (0.047) | 0.153* (0.091) |
| Intercept | 0.499*** (0.162) | 0.458*** (0.069) | 0.419*** (0.125) |
| Observations | 243 | 243 | 243 |
| Hausman test | 32.28 (0.386) | 16.98 (0.596) | 11.77 (1.000) |
| Weak identification test | 60.58 (0.000) | 29.05 (0.000) | 10.97 (0.052) |
| Hansen test (overidentification) | 1.49 (0.999) | 1.20 (1.000) | 1.44 (0.999) |
| R ² (%) | 93.97% | 95.93% | 98.97% |

^a Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. We use the Stock & Yogo (2005) weak identification test, where the null hypothesis is that instruments are weak (non-significant correlation with the endogenous variable). The Hansen overidentification test has a null hypothesis such that there is a null correlation between the instrument and the error term. Reliable instruments have to reject the null hypothesis in the weak identification test and accept it in the Hansen test.

APPENDIX: Corporate Sustainability Rating

| Stakeholder (j) | | Items (i) | Score (%) | Weight | Weighted score (%) | Weight | Weighted score (%) |
|----------------------|----|---|-----------|----------|------------------------|--------------------------------|--|
| | | | S_{ij} | W_{ij} | $S_{ij} \times W_{ij}$ | $\frac{W_{ij}}{\sum_i W_{ij}}$ | $\frac{W_{ij}}{\sum_i W_{ij}} \times S_{ij}$ |
| Community | 1 | Local communities programs | 100 | 0.014 | 1.379 | 0.154 | 15.385 |
| | 2 | Formal policy on local community involvement | 100 | 0.021 | 2.069 | 0.231 | 23.077 |
| | 3 | Management responsibility for local community affairs | 100 | 0.014 | 1.379 | 0.154 | 15.385 |
| | 4 | Formal volunteer programs | 0 | 0.014 | 0.000 | 0.154 | 0.000 |
| | 5 | Programs for consultation with local communities | 0 | 0.014 | 0.000 | 0.154 | 0.000 |
| | 6 | Percentage of donations directed at local communities | 20 | 0.014 | 0.276 | 0.154 | 3.077 |
| | | <i>COMMUNITY SCORE</i> | | | | | 56.92 |
| Customer | 1 | A formal policy statement noting customer issues | 100 | 0.010 | 1.034 | 0.038 | 3.797 |
| | 2 | Formal policy on product quality | 100 | 0.052 | 5.172 | 0.190 | 18.987 |
| | 3 | Formal policy on marketing/advertising practices | 100 | 0.052 | 5.172 | 0.190 | 18.987 |
| | 4 | Formal policy on product safety | 100 | 0.028 | 2.759 | 0.101 | 10.127 |
| | 5 | Board responsibility for customer satisfaction | 100 | 0.028 | 2.759 | 0.101 | 10.127 |
| | 6 | Facilities with quality certification | 0 | 0.052 | 0.000 | 0.190 | 0.000 |
| | 7 | Marketing practices to satisfy customers | 0 | 0.052 | 0.000 | 0.190 | 0.000 |
| | | <i>CUSTOMERS SCORE</i> | | | | | 62.03 |
| Corporate governance | 1 | Number of board committees | 60 | 0.010 | 0.621 | 0.058 | 3.462 |
| | 2 | Managerial stock ownership (%) | 20 | 0.007 | 0.138 | 0.038 | 0.769 |
| | 3 | The company has corporate governance principles | 100 | 0.062 | 6.207 | 0.346 | 34.615 |
| | 4 | Directors' term of office | 20 | 0.007 | 0.138 | 0.038 | 0.769 |
| | 5 | Board performance evaluation | 0 | 0.007 | 0.000 | 0.038 | 0.000 |
| | 6 | Number of NEDs in the Board | 100 | 0.017 | 1.724 | 0.096 | 9.615 |
| | 7 | Number of independent NEDs in the Board | 40 | 0.017 | 0.690 | 0.096 | 3.846 |
| | 8 | Separate position for chairman of board and CEO | 100 | 0.017 | 1.724 | 0.096 | 9.615 |
| | 9 | "One share, one vote" principle | 100 | 0.017 | 1.724 | 0.096 | 9.615 |
| | 10 | Absence of anti-takeover devices | 0 | 0.017 | 0.000 | 0.096 | 0.000 |
| | | <i>CORPORATE GOVERNANCE SCORE</i> | | | | | 72.31 |
| Employees | 1 | Policies/Principles regarding employees | 100 | 0.010 | 1.034 | 0.042 | 4.167 |
| | 2 | Formal policy statement on health and safety | 100 | 0.024 | 2.414 | 0.097 | 9.722 |
| | 3 | Formal policy on diversity/employment equity | 100 | 0.024 | 2.414 | 0.097 | 9.722 |
| | 4 | Formal policy on freedom of association | 100 | 0.024 | 2.414 | 0.097 | 9.722 |
| | 5 | Formal policy statement on child/forced labor | 100 | 0.010 | 1.034 | 0.042 | 4.167 |
| | 6 | Formal policy statement on working hours | 100 | 0.024 | 2.414 | 0.097 | 9.722 |
| | 7 | Formal policy statement on wages | 100 | 0.010 | 1.034 | 0.042 | 4.167 |
| | 8 | Board responsibility for human resources issues | 100 | 0.017 | 1.724 | 0.069 | 6.944 |
| | 9 | Specific health and safety targets | 0 | 0.017 | 0.000 | 0.069 | 0.000 |
| | 10 | Diversity/Equal opportunity programs | 0 | 0.017 | 0.000 | 0.069 | 0.000 |
| | 11 | Work/Life programs | 0 | 0.017 | 0.000 | 0.069 | 0.000 |
| | 12 | Training programs | 100 | 0.017 | 1.724 | 0.069 | 6.944 |
| | 13 | Participative management programs | 0 | 0.017 | 0.000 | 0.069 | 0.000 |
| | 14 | Cash profit sharing programs | 0 | 0.010 | 0.000 | 0.042 | 0.000 |
| | 15 | Supervisory Board (NEDs) | 100 | 0.007 | 0.690 | 0.028 | 2.778 |
| | | <i>EMPLOYEES SCORE</i> | | | | | 68.06 |

| Stakeholder (<i>j</i>) | Items (<i>i</i>) | Score (%) | Weight | Weighted score (%) | Weight | Weighted score (%) |
|--------------------------|--|-----------|----------|------------------------|--------------------------------|--|
| | | S_{ij} | W_{ij} | $S_{ij} \times W_{ij}$ | $\frac{W_{ij}}{\sum_i W_{ij}}$ | $\frac{W_{ij}}{\sum_i W_{ij}} \times S_{ij}$ |
| Suppliers | 1 Code of conduct for contractors | 100 | 0.014 | 1.379 | 0.058 | 5.797 |
| | 2 Board responsibility for contractors' human rights | 100 | 0.052 | 5.172 | 0.217 | 21.739 |
| | 3 Contractors' awareness programs | 100 | 0.052 | 5.172 | 0.217 | 21.739 |
| | 4 Contractors with social certification | 0 | 0.034 | 0.000 | 0.145 | 0.000 |
| | 5 Health and safety among contractors | 100 | 0.017 | 1.724 | 0.072 | 7.246 |
| | 6 Freedom of association among contractors | 100 | 0.017 | 1.724 | 0.072 | 7.246 |
| | 7 Child/Forced labor among contractors | 0 | 0.017 | 0.000 | 0.072 | 0.000 |
| | 8 Discrimination among contractors | 100 | 0.017 | 1.724 | 0.072 | 7.246 |
| | 9 Employment conditions among contractors | 20 | 0.017 | 0.345 | 0.072 | 1.449 |
| <i>SUPPLIERS SCORE</i> | | | | | | 72.46 |

$$CSR = \sum_{ij} S_{ij} \times W_{ij} \quad \boxed{69.10}$$

Sustainalytics provides a wide range of research and consultancy services to the largest asset managers, insurance companies, pension funds, banks, and social investment institutions in the world. One of these services is the Sustainalytics Global Profile (SGP). SGP provides a rating that enables users to integrate firms' detailed profiles in a unique rating that contains 199 information items. These information items are translated into a more comprehensive format – a rating – by implementing Likert-type scales and then they are grouped into eight research sections. The first provides a description of ethical/unethical corporate activities, such as political donations, corruption and bribery, and the existence of business ethics programs addressing these issues. The last section measures the degree of involvement in controversial business activities like gambling, alcohol, pornography, animal testing, and tobacco. The realization of one of these controversial activities is motive of exclusion of the SGP sustainability index. The remaining six sections cover different issues of the six stakeholders analyzed (community; customers; employees; corporate governance; suppliers and environment). In particular, for each stakeholder, the database addresses the level of firm's involvement in four different areas: the level of a firm's transparency/disclosure; the existence of corporate policies and principles for the stakeholder; the importance management procedures; and the level of controversies in the relation with this stakeholder. In each of these areas, there are different information items that give a score in a Likert-type scale. Also, each information item has a weight according to a methodology developed by SGP. The final score provided by SGP is the sum of each of the scores of all the items averaged by its corresponding weight. Also, the database gives scores for each stakeholder. These scores are computed through the weighted average of the corresponding information items to a given stakeholder normalized by the sum of the weights of the items for the corresponding stakeholder. For clarification purposes, below we describe in detail the information items that we consider in the paper for a particular, real company (Nestle). In particular, we focus on those items related to policies and principles as well as managerial procedures of the five stakeholders that are considered in the study (community; customers; corporate governance; employees; suppliers).